

IN THE CLAIMS

Claims 1-37 are presented below:

Claims 1-12. (Canceled)

13. (New) An image forming apparatus, comprising:

a power supply configured to provide operating power for said image forming apparatus;

a fixing device having a heat source and configured to fix a developer image on a transfer sheet by heating the transfer sheet; and

a fixing device control section configured to allocate a first level of said operating power to said heat source in an initial startup mode, and to allocate a second level of said operating power lower than said first level to said heat source in a non-startup mode.

14. (New) The image forming device of Claim 13, further comprising an energy saving control section coupled to said power supply and said fixing device control section, said energy control saving section configured to generate a startup signal for initiating said startup mode.

15. (New) The image forming device of Claim 14, further comprising an energy saving control release switch coupled to said energy saving control section and configured to be operated by an operator to release said image forming apparatus from a standby power mode, said energy saving control section generating said startup signal upon activation of said energy saving control release switch.

16. (New) The image forming apparatus of Claim 14, further comprising a relay that

switchably couples said power supply to said heat source and said fixing device control section, said switch being configured to be activated by said startup signal.

17. (New) The image forming apparatus of Claim 16, wherein said heat source comprises an inductive coil coupled to said power supply through said relay.

18. (New) The image forming apparatus of Claim 17, further comprising a switching element coupled to said inductive coil and said fixing device control section, said switching element configured to switch current through said inductive coil.

19. (New) The image forming apparatus of Claim 18, wherein said fixing device control section comprises a pulse width modulation device configured to control a switching rate of said switching element.

20. (New) The image forming apparatus of Claim 19, further comprising a temperature sensing device positioned adjacent to said fixing device and coupled to said pulse width modulation device, said pulse width modulation device configured to control said switching rate of said switching element based on a temperature of said fixing device.

21. (New) The image forming device of Claim 18, wherein said pulse width modulation device is configured to:

control said switching element to operate at a first frequency corresponding to said first level of operating power when a temperature of said fixing device is below a predetermined threshold; and

control said switching device to operate at a second frequency corresponding to said second level of operating power when a temperature of said fixing device reaches a

predetermined level sufficient to perform fixing of said image.

22. (New) The image forming apparatus of Claim 18, further comprising an over current sensing circuit configured to detect an over current of said switching element turn off said switching element when said over current is detected.

23. (New) The image forming apparatus of Claim 18, further comprising an over temperature sensing circuit configured to detect an over temperature of said switching element turn off said switching element when said over temperature is detected.

24. (New) The image forming apparatus of Claim 14, further comprising an abnormal condition detection circuit configured to detect an abnormal condition in said image forming device and to generate and send an abnormal condition signal to said energy saving control device, wherein said energy saving control device turns off said relay to remove power from said fixing device when an abnormal condition is detected.

25. (New) The image forming apparatus of Claim 13, wherein said energy saving control section is configured to generate a non-startup mode signal for stopping said startup mode and initiating said non-startup mode.

26. (New) An image forming apparatus, comprising:
a power supply configured to provide operating power for said image forming apparatus;
a fixing device having a heat source and configured to fix a developer image on a transfer sheet by heating the transfer sheet; and
means for allocating a first level of said operating power to said heat source in an

initial startup mode, and to allocate a second level of said operating power lower than said first level to said heat source in a non-startup mode. .

27. (New) The image forming apparatus of Claim 26, wherein said means for allocating comprises a means for switching a frequency of power pulses delivered to said heat source.

28. (New) The image forming apparatus of Claim 27, further comprising means for detecting an over current condition of said means for switching and turning off said means for switching when said over current is detected.

29. (New) The image forming apparatus of Claim 27, further comprising means for detecting an over temperature of said means for switching and turning off said means for switching when said over temperature is detected.

30. (New) The image forming apparatus of Claim 26, further comprising a means for detecting an abnormal condition in said image forming device and removing power from said fixing device when said abnormal condition is detected.

31. (New) The image forming apparatus of Claim 26, further comprising means for switching said power supply from a standby power mode where a predetermined energy saving power level is supplied to the image forming apparatus to a non-standby power mode.

32. (New) A method of supplying power to an image forming apparatus, comprising:
supplying a predetermined level of operating power to the image forming device;
allocating a first level of said operating power to a heating element of a fixing device

of the image forming apparatus in an initial startup mode;

detecting when said fixing device reaches a predetermined temperature capable of fixing a developer image on a transfer sheet; and

after said fixing device reaches said predetermined temperature, allocating a second level of said operating power lower than said first level to said heating element in a non-startup mode.

33. (New) The method of Claim 32, wherein said allocating a first and second power level comprises controlling a switching frequency of a switching element connected to said heating element.

34. (New) The method of Claim 33, further comprising detecting an over current condition of said switching element and turning off said switching when said over current is detected.

35. (New) The method of Claim 33, further comprising detecting an over temperature of said switching element and turning off said switching element when said over temperature is detected.

36. (New) The method of Claim 32, further comprising detecting an abnormal condition in said image forming device and removing power from said fixing device when said abnormal condition is detected.

37. (New) The method of Claim 32, further comprising switching a power supply of said image forming device from a standby power mode where a predetermined energy saving power level is supplied to the image forming apparatus to a non-standby power level, said

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Inventor: Masahide Nakaya
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non-standby power level being said predetermined level of operating power.